

## 1. Berkshire: National Area 66, London Basin

### Windsor Great Park SSSI (SU97) and adjacent areas - parkland - U4

Windsor Great Park includes patches of mown acid grassland amongst more improved grasslands. *Festuca-Agrostis-Galium* Grassland (U4a & b) dominates but locally grades to *Deschampsia flexuosa* Grassland (U2), *Agrostis-Rumex* Grassland (U1) and wetter grassland with *Molinia* (M25b). The acid grassland itself grades to neutral grassland. The unimproved grasslands in Windsor Great Park have good 'wax cap' grassland fungi floras and important mycorrhizal fungi assemblages associated with ancient trees. Only one lowland acid grassland indicator species was recorded from the site (*Aira praecox*).

### Windsor Great Park SSSI

#### Quadrats of U4a and U4b

G Steven 6 & 7/7/1995, English Nature

Species	U4a	U4a	U4a	U4b
	SH7	SH10	PH3	SH9
<i>Agrostis capillaris</i>	3	7	4	4
<i>Pseudoscleropodium purum</i>	4	4		4
<i>Festuca ovina</i>	5		6	4
<i>Festuca rubra</i>		8	4	5
<i>Luzula campestris</i>	3	2	4	3
<i>Pilosella officinarum</i>	6		6	4
<i>Potentilla erecta</i>	3	4	2	4
<i>Anthoxanthum odoratum</i>	3			5
<i>Calluna vulgaris</i>	5		6	
<i>Conopodium majus</i>	2	3		2
<i>Danthonia decumbens</i>	5		3	3
<i>Galium saxatile</i>	2		4	
<i>Holcus lanatus</i>		4	2	2
<i>Rumex acetosa</i>		3		1
<i>Stellaria graminea</i>	1	2		2
<i>Carex pilulifera</i>				1
<i>Deschampsia flexuosa</i>	2			
<i>Dicranum scoparium</i>	2			
<i>Hypochaeris radicata</i>	3			3
<i>Nardus stricta</i>	2		3	
<i>Cerastium fontanum</i>				1
<i>Hypnum cupressiforme</i> agg			4	
<i>Plantago lanceolata</i>				5
<i>Tragopogon pratensis</i>				1
<i>Trifolium repens</i>				3
<i>Veronica officinalis</i>				3
<b>Total Number of Species</b>	<b>16</b>	<b>9</b>	<b>12</b>	<b>20</b>

SH = Snow Hill

PH = Primrose Hill

## 2. Cornwall & Devon: Natural Areas 91 and 95, South Devon and Cornish Killas and Granites

### Cliff top grassland, Festuca-Agrostis-Rumex grassland Hypochaeris sub-community - U1f

The samples given in the table below were collected during a survey along the south coast of Cornwall and Devon of the nationally rare *Lotus angustissimus* by Leach *et al* (1994). This explains the constancy V for this species. The sub-community represents an extreme type of U1f where even *Festuca rubra* is rare, *Festuca filiformis* is absent and *Vulpia bromoides* is the predominant grass. It should be contrasted with the much more heathy type of U1f sampled from Boltons Bench in the New Forest (5a). The coastal sub-community occurs generally as small areas on thin droughty soils, often around rock outcrops or as narrow strips alongside paths. Lack of grazing and scrub invasion are likely to have led to loss of this habitat in Cornwall and Devon.

#### Constancy table for U1f with *Lotus angustissimus* (from Leach *et al*, 1994)

Species	Constancy
<i>Lotus angustissimus</i> @ **	V(1-7)
<i>Agrostis capillaris</i>	V (2-8)
<i>Vulpia bromoides</i>	V (2-6)
<i>Dactylis glomerata</i>	V (1-6)
<i>Holcus lanatus</i>	IV (2-5)
<i>Plantago coronopus</i> @	IV (2-5)
<i>Crepis capillaris</i>	IV (2-4)
<i>Hypochaeris radicata</i>	IV (1-5)
<i>Trifolium dubium</i>	IV (1-3)
<i>Aira caryophylla</i> @	III (2-4)
<i>Sedum anglicum</i> @	III (2-4)
<i>Rumex acetosella</i>	III (2-3)
<i>Plantago lanceolata</i>	III (1-9)
<i>Bellis perennis</i>	III (1-6)
<i>Lotus subbiflorus</i> @ *	III (1-6)
<i>Trifolium repens</i>	III (1-5)
<i>Lolium perenne</i>	III (1-4)
<i>Bromus hordeaceus</i>	III (1-3)
<i>Anagallis arvensis</i>	III (1-3)
<i>Sherardia arvensis</i> @	III (1-3)
<i>Teucrium scorodonia</i>	III (1-3)
<i>Vicia sativa</i>	III (1-3)
<i>Sonchus asper</i>	III (1-2)
<i>Senecio jacobaea</i>	II (2-4)
<i>Convolvulus arvensis</i>	II (2-3)
<i>Ornithopus perpusillus</i> @	II (2-3)
<i>Leontodon saxatilis</i>	II (1-5)
<i>Prunella vulgaris</i>	II (1-4)
<i>Cirsium arvense</i>	II (1-3)
<i>Erodium moschatum</i> @ *	II (1-3)
<i>Jasione montana</i> @	II (1-3)
<i>Sagina procumbens</i>	II (1-3)
<i>Trifolium striatum</i> @	II (1-3)
<i>Trifolium campestre</i>	II (1-3)

Species	Constancy
<i>Centaurium erythraea</i>	II (1-2)
<i>Cerastium fontanum</i>	II (1-2)
<i>Hypericum humifusum</i>	II (1-2)
<i>Pteridium aquilinum</i>	II (1-2)
<i>Rubus fruticosus</i>	II (1-2)
<i>Ulex europaeus</i>	II (1)
<i>Carduus nutans</i>	II (1)
<i>Digitalis purpurea</i>	II (1)
<i>Geranium molle</i>	II (1)
<i>Sagina apetala</i>	II (1)
<i>Glechoma hederacea</i>	I (4)
<i>Cynosurus cristatus</i>	I (3)
<i>Festuca rubra</i>	I (3)
<i>Arenaria serpyllifolia</i>	I (3)
<i>Galium mollugo</i>	I (3)
<i>Plantago major</i>	I (3)
<i>Potentilla anglica</i>	I (3)
<i>Potentilla erecta</i>	I (3)
<i>Ranunculus repens</i>	I (3)
<i>Pilosella officinarum</i>	I (2-4)
<i>Poa annua</i>	I (2-3)
<i>Brachypodium sylvaticum</i>	I (2)
<i>Carlina vulgaris</i>	I (2)
<i>Daucus carota</i>	I (2)
<i>Euphrasia sp</i>	I (2)
<i>Galium saxatile</i>	I (2)
<i>Polygala vulgaris</i>	I (2)
<i>Polygonum aviculare</i>	I (2)
<i>Potentilla reptans</i>	I (2)
<i>Rumex acetosa</i>	I (2)
<i>Trifolium arvense</i> @	I (2)
<i>Lotus corniculatus</i>	I (1-3)
<i>Geranium dissectum</i>	I (1-2)
<i>Potentilla sterilis</i>	I (1-2)
<i>Aira praecox</i> @	I (1)
<i>Anthoxanthum odoratum</i>	I (1)

Species	Constancy
<i>Achillea millefolium</i>	I (1)
<i>Cirsium vulgare</i>	I (1)
<i>Erodium cicutarium</i> @	I (1)
<i>Erodium maritimum</i> @	I (1)
<i>Galium verum</i>	I (1)
<i>Geranium columbinum</i>	I (1)
<i>Linum catharticum</i>	I (1)
<i>Medicago polymorpha</i> @ *	I (1)
<i>Myosotis discolor</i>	I (1)
<i>Ononis repens</i>	I (1)
<i>Picris echioides</i>	I (1)
<i>Sanguisorba minor</i>	I (1)
<i>Sonchus oleraceus</i>	I (1)
<i>Taraxacum</i> sp.	I (1)
<i>Torilis japonica</i>	I (1)
<i>Trifolium glomeratum</i> @ *	I (1)
<i>Trifolium pratense</i>	I (1)
<i>Trifolium scabrum</i> @	I (1)
<i>Trifolium subterraneum</i> @	I (1)
<i>Veronica chamaedrys</i>	I (1)
<i>Veronica serpyllifolia</i>	I (1)

Number of samples	14
Total number taxa	91
Mean number taxa/sample	25
Range of species number	14-40
Number acid grassland indicators (@)	18
Number nationally scarce (*)	1
Number nationally rare (**)	4

Two other acid grassland indicators, *Moenchia erecta*, and *Trifolium ornithopodioides* also occur in the sub-community (S Leach pers.comm.)

### 3. Dorset: Natural Area 80, South Wessex Downs

#### North Poorton (SY59) - enclosed pasture - U4

The site was surveyed by Ron Porley, English Nature, in 1990 (Porley 1992). The area includes a well developed stand of moist acid grassland (Festuca-Agrostis-Galium Grassland U4) on a north-facing slope in western Dorset, a region with a low moisture deficit. The underlying soils are well-draining and overly Jurassic sands. The stand includes frequent anthills which have a U1-type of vegetation, hence the records of species such as *Rumex acetosella* and *Aira praecox* in the constancy table. The main sward is, however, a good example of U4a for a lowland situation, although the abundance of *Leontodon autumnalis* is atypical of U4 in general. Only one lowland acid grassland indicator species was recorded from the site (*Aira praecox*). There is a well-developed bryophyte layer, with *Rhytidiadelphus squarrosus* dominating, and variable amounts of *Pseudoscleropodium purum*, *Dicranum scoparium* and *Hylocomium splendens*. The site is grazed by sheep, cattle and rabbits.

#### North Poorton

#### Constancy table for U4a with U1a on Anthills

R Porley 6/9/1990, English Nature

Species	Q1	Q2	Q3	Q4	Q6	Constancy
<i>Achillea millefolium</i>	2	5	4	2	2	V
<i>Agrostis capillaris</i>	5	7	8	8	8	V
<i>Anthoxanthum odoratum</i>	3	4	2	3	4	V
<i>Galium saxatile</i>	8	8	8	7	8	V
<i>Leontodon autumnalis</i>	3	4	2	2	6	V
<i>Luzula campestris</i>	3	3	3	3	3	V
<i>Potentilla erecta</i>	4	3	4	4	6	V
<i>Pseudoscleropodium purum</i>	4	3	3	4	2	V
<i>Rhytidiadelphus squarrosus</i>	8	6	8	8	8	V
<i>Festuca ovina</i>	8	8	8	6		IV
<i>Rumex acetosa</i>		2	4	2	4	IV
<i>Dicranum scoparium</i>	2	2		2		III
<i>Ilolcus lanatus</i>		3		2	2	III
<i>Hypochaeris radicata</i>		1	3		3	III
<i>Peltigera sp</i>	1	1	2			III
<i>Rumex acetosella</i>	6			4	2	III
<i>Veronica officinalis</i>	2		4	3		III
<i>Aira praecox</i>			1	2		II
<i>Lophocolea bidentata</i>			1		1	II
<i>Polytrichum formosum</i>	2	1				II
<i>Viola riviniana</i>		3	2			II
<i>Atrichum undulatum</i>			2			I
<i>Cirsium palustre</i>		1				I
<i>Festuca rubra</i>					5	I
<i>Hylocomium splendens</i>	2					I
<i>Hypnum cupressiforme agg</i>			1			I
<i>Plagiomnium affine</i>					1	I
<i>Plantago lanceolata</i>		1				I
<i>Polygala vulgaris</i>	2					I
<i>Ranunculus acris</i>		2				I
<i>Veronica chamaedrys</i>		2				I
<b>Total Number of Species</b>	<b>17</b>	<b>21</b>	<b>19</b>	<b>16</b>	<b>16</b>	<b>Mean = 17.8</b>
<b>Sward Height, cm.</b>	<b>2-4</b>	<b>2-4</b>	<b>2-4</b>	<b>2-4</b>	<b>4-6</b>	

#### 4. Gloucestershire: Natural Area 61, Dean Plateau and Wye Valley

##### May Hill SSSI (SO 6921) - large enclosure, pasture - U1e

May Hill SSSI is an area of acid grassland on the summit of an isolated Silurian sandstone hill, north-east of the Forest of Dean at 235-300m in height. It is an upland fringe site in character. It is owned by the National Trust and was surveyed by Gloucestershire Wildlife Management Ltd for EN in 1995. The predominant community is a species-poor U1e community but there are also areas of M6 mire and rush pasture (M23b). The extensive nature of the acid grassland is a rare feature in Gloucestershire. The community species list and a constancy table of the four U1e quadrats recorded is given below. Bryophytes were not recorded and 1m<sup>2</sup> quadrats used rather than 4m<sup>2</sup> quadrats. The grassland is heavily sheep-grazed and rabbit grazing is locally significant. Some management of gorse and bracken by flailing is carried out.

##### May Hill SSSI,

##### U1e: Community species list

Date of survey: 5/6/95

Species	DAFOR
<b>Trees &amp; tall shrubs</b>	
<i>Betula pendula</i>	R
<i>Crataegus monogyna</i>	R
<i>Quercus robur</i>	R
<b>Dwarf shrubs</b>	
<i>Ulex gallii</i>	O
<b>Grasses</b>	
<i>Agrostis capillaris</i>	F
<i>Aira praecox</i> @	R
<i>Anthoxanthum odoratum</i>	F
<i>Danthonia decumbens</i>	R
<i>Deschampsia cespitosa</i>	R
<i>Deschampsia flexuosa</i>	O
<i>Festuca ovina</i> agg	F
<i>Festuca rubra</i>	R
<i>Nardus stricta</i>	R
<i>Holcus lanatus</i>	F
<i>Poa annua</i>	R
<i>Poa pratensis</i>	O
<b>Other vascular plants</b>	
<i>Carex echinata</i>	R
<i>Carex ovalis</i>	R
<i>Carex pilulifera</i>	R
<i>Carex viridula oedocarpa</i>	R
<i>Cerastium fontanum</i>	R
<i>Cirsium palustre</i>	R
<i>Cirsium vulgare</i>	R

Species	DAFOR
<i>Conopodium majus</i>	R
<i>Digitalis purpurea</i>	R
<i>Galium saxatile</i>	F
<i>Hyacinthoides non-scripta</i>	R
<i>Juncus articulatus</i>	R
<i>Juncus compressus</i>	R
<i>Leontodon hispidus</i>	R
<i>Lotus corniculatus</i>	R
<i>Luzula campestris</i>	F
<i>Pilosella officinarum</i>	R
<i>Plantago lanceolata</i>	R
<i>Polygala serpyllifolia</i>	R
<i>Potentilla erecta</i>	O
<i>Pteridium aquilinum</i>	O
<i>Ranunculus bulbosus</i>	R
<i>Rumex acetosa</i>	R
<i>Rumex acetosella</i>	F
<i>Sagina procumbens</i>	R
<i>Stellaria graminea</i>	R
<i>Taraxacum</i> sp.	R
<i>Teucrium scorodonia</i>	R
<i>Trifolium repens</i>	R
<i>Ulex gallii</i>	R
<i>Urtica dioica</i>	R
<i>Veronica chamaedrys</i>	R
<i>Veronica officinalis</i>	O
<i>Viola riviniana</i>	R

Total number of species = 49

Number of acid grassland indicator species (@) = 1

May Hill SSSI  
 UIe: Constancy table  
 Date of survey: 5/6/95

Species	Q1	Q2	Q3	Q4	Constancy
<i>Agrostis capillaris</i>	5	5	5	6	IV
<i>Anthoxanthum odoratum</i>	5	5	5	5	IV
<i>Festuca ovina agg</i>	5	7	6	5	IV
<i>Galium saxatile</i>	7	5	5	5	IV
<i>Holcus lanatus</i>	4	3	1	5	IV
<i>Luzula campestris</i>	5	5	4	1	IV
<i>Rumex acetosella</i>	4	4	2	5	IV
<i>Potentilla erecta</i>		1	2	4	III
<i>Deschampsia flexuosa</i>	4			4	II
<i>Pteridium aquilinum</i>		1		4	I
<i>Leontodon hispidus</i>			2		I
<i>Lotus corniculatus</i>			4		I
<i>Pilosella officinarum</i>			4		I
<i>Poa pratensis</i>		1			I
<i>Polygala serpyllifolia</i>				2	I
<i>Taraxacum sp</i>			3		I
<i>Teucrium scorodonia</i>				1	I
<i>Trifolium repens</i>		1			I
<i>Ulex gallii</i>			4		I
<i>Veronica officinalis</i>			2		
<b>Species total</b>	<b>8</b>	<b>11</b>	<b>14</b>	<b>12</b>	<b>11.25 (mean)</b>

## 5. Hampshire: Natural Area 77, New Forest

### The New Forest SSSI and surrounding areas

Acid grassland forms an integral part of the New Forest heathlands, and covers more than 2000 ha. Examples of the main types found are given below. Most are grazed within the extensive pastoral system of the New Forest. The main types of dry acid grassland were sampled by the contractor in 1997 and selected examples are presented below, along with some quadrat data collected during an NCC survey of river terraces west of the New Forest proper.

#### a. Boltons Bench (SU3008) - settlement-edge green - U1f

This site consists of about 13.5ha of Festuca-Agrostis-Rumex Grassland Hypochaeris sub-community (U1f) on an ancient village green, east of Lyndhurst. The green has been locally disturbed by past sand digging and by war-time installations. A constancy table and a community list for U1f are given below. The variable U1f here is typical of the range of vegetation referable to U1f in the New Forest. *Danthonia* is frequent throughout while *Nardus* occurs locally. This is very typical of New Forest stands and the samples range from very dry stands on higher ground to mesic stands at the base of slopes. *Chamaemelum nobile* is very characteristic of the latter stands. Within the acid grassland are patches of Gorse scrub, much of which has been recently burned or cut.

Away from the village the U1f grassland is replaced by Bracken (U20a) to the east, and by heath (H2c with patches of H3a) to the north-east. There is an ephemeral pond with vegetation referable to MG13, with the RDB species *Galium constrictum* in the lowest part. The ephemeral pond with vegetation supports Fairy Shrimps when it remains wet for long enough in summer.

A total of 77 species were recorded from the U1f, of which 16 are dry acid grassland indicator species and one, *Chamaemelum nobile*, is a nationally scarce species. Some species, such as *Cerastium diffusum*, *Filago minima*, and the nationally declining *Sagina subulata*, were noticeably restricted to areas disturbed by sand digging, war-time buildings and anti-car ditches by the roads.

The sward height is reduced to less than 1cm by heavy pony and cattle grazing, and lower plants are very prominent. The grassland attracts free-ranging animals and the green is the centre of several pony herd home ranges as well as receiving regular attention from a cattle herd (in spite of the shortness of the sward). Within the acid grassland the Gorse is managed by burning and cutting on a long rotation, this is because of slow regrowth after winter browsing. The green is a major honey-pot site for tourists and part is a cricket pitch resulting in local areas being trampled into a very species-poor *Agrostis capillaris* sward.

**Boltons Bench, New Forest**  
**UIf community list (NA Sanderson 26/5/97, EPR)**

Species	DAFOR
<b>Trees &amp; tall shrubs</b>	
<i>Ulex europaeus</i>	F
<b>Dwarf shrubs</b>	
<i>Calluna vulgaris</i>	O
<i>Erica cinerea</i>	O
<i>Ulex minor</i> @	R
<b>Grasses</b>	
<i>Agrostis capillaris</i>	D
<i>Agrostis curtisii</i>	O
<i>Aira praecox</i> @	A
<i>Anthoxanthum odoratum</i>	O
<i>Danthonia decumbens</i>	F
<i>Festuca filiformis</i>	F
<i>Festuca rubra</i>	F
<i>Holcus lanatus</i>	R
<i>Molinia caerulea</i>	R
<i>Nardus stricta</i>	O
<i>Poa annua</i>	F
<i>Poa pratensis</i>	O
<i>Vulpia bromoides</i>	A
<b>Other vascular plants</b>	
<i>Achillea millefolium</i>	O
<i>Aphanes inexpectata</i> @	F
<i>Bellis perennis</i>	O
<i>Carex caryophylla</i>	O
<i>Carex hirta</i>	R
<i>Carex pilulifera</i>	O
<i>Cerastium diffusum</i> @	F
<i>Cerastium fontanum</i>	O
<i>Cerastium semidecandrum</i> @	O
<i>Chamaemelum nobile</i> * @	F
<i>Coronopus didymus</i>	O
<i>Erophila verna</i>	O
<i>Filago minima</i> @	O
<i>Galium saxatile</i>	R
<i>Geranium molle</i>	R
<i>Hypochaeris radicata</i>	A
<i>Juncus bufonius</i>	O
<i>Juncus squarrosus</i>	R
<i>Leontodon saxatilis</i>	F
<i>Lotus corniculatus</i>	O
<i>Luzula campestris</i>	O

Species	DAFOR
<i>Moenchia erecta</i> @	F
<i>Montia fontana minor</i>	O
<i>Ornithopus perpusillus</i> @	F
<i>Pilosella officinarum</i>	F
<i>Plantago coronopus</i> @	A
<i>Plantago lanceolata</i>	O
<i>Potentilla erecta</i>	O
<i>Prunella vulgaris</i>	R
<i>Ranunculus bulbosus</i>	O
<i>Ranunculus repens</i>	R
<i>Rubus fruticosus</i>	O
<i>Rumex acetosella</i>	A
<i>Sagina apetala</i>	O
<i>Sagina procumbens</i>	F
<i>Sagina subulata</i> @	O
<i>Senecio jacobaea</i>	O
<i>Senecio sylvaticus</i>	O
<i>Spergularia rubra</i> @	O
<i>Taraxacum sect Erythrosperma</i>	O
<i>Trifolium dubium</i>	O
<i>Trifolium micranthum</i>	F
<i>Trifolium ornithopodioides</i> @	F
<i>Trifolium repens</i>	O
<i>Trifolium striatum</i> @	R
<i>Veronica arvensis</i>	O
<i>Veronica officinalis</i>	O
<i>Veronica serpyllifolia</i>	R
<b>Mosses</b>	
<i>Brachythecium albicans</i>	O
<i>Campylopus introflexus</i>	O
<i>Ceratodon purpureus</i>	O
<i>Dicranum scoparium</i>	F
<i>Hypnum lacunosum tectorum</i> @	A
<i>Hypnum jutlandicum</i>	O
<i>Polytrichum juniperinum</i>	A
<i>Racomitrium elongatum</i> @	O
<i>Rhytidiadelphus squarrosus</i>	O
<b>Lichens</b>	
<i>Cladonia furcata</i>	O
<i>Coelocaulon aculeatum</i> @	R
<i>Placynthiella icmalea</i>	R

Total number of species = 77  
 Number of nationally scarce species (\*) = 1  
 Number of acid grassland indicator species (@) = 17

**Boltons Bench, New Forest**

Constancy table for U1f (N A Sanderson 26/5/97, EPR)

Species	Q1	Q2	Q3	Q4	Q5	Constancy
<i>Agrostis capillaris</i>	5	5	7	8	5	V
<i>Danthonia decumbens</i>	5	4	1	1	4	V
<i>Hypnum lacunosum tectorum</i>	8	5	4	6	3	V
<i>Hypochaeris radicata</i>	5	6	4	3	4	V
<i>Rumex acetosella</i>	3	3	3	3	3	V
<i>Vulpia bromoides</i>	4	6	5	5	3	V
<i>Aira praecox</i>		4	3	4	3	IV
<i>Ornithopus perpusillus</i>	2	4		2	1	IV
<i>Plantago coronopus</i>		2	4	3	3	IV
<i>Polytrichum juniperinum</i>	3	3	1	3		IV
<i>Rhytiadelphus squarrosus</i>		3	1	3	4	IV
<i>Chamaemelum nobile</i>	4	2			6	III
<i>Festuca rubra</i>		3		5	6	III
<i>Pilosella officinarum</i>		2		2	6	III
<i>Poa annua</i>		2	2	3		III
<i>Bellis perennis</i>				3	3	II
<i>Festuca filiformis</i>	4		6			II
<i>Leontodon saxatilis</i>			2	2		II
<i>Luzula campestris</i>				1	2	II
<i>Plantago lanceolata</i>				3	3	II
<i>Poa pratensis</i>				1	3	II
<i>Sagina procumbens</i>		2		2		II
<i>Trifolium micranthum</i>				3	3	II
<i>Trifolium ornithopodioides</i>			3	3		II
<i>Achillea millefolium</i>	2					I
<i>Brachytecium albicans</i>			4			I
<i>Calluna vulgaris</i>		1				I
<i>Carex caryophylla</i>					5	I
<i>Cerastium diffusum</i>		1				I
<i>Cerastium semidecandrum</i>				3		I
<i>Cladonia furcata</i>	1					I
<i>Coelocaulon aculeatum</i>			1			I
<i>Dicranum scoparium</i>		3				I
<i>Filago minima</i>			2			I
<i>Geranium molle</i>				2		I
<i>Holcus lanatus</i>					3	I
<i>Moenchia erecta</i>		1				I
<i>Montia fontana minor</i>		2				I
<i>Nardus stricta</i>		3				I
<i>Sagina subulata</i>			3			I
<i>Taraxacum sect Erythrosperma</i>				1		I
<i>Trifolium repens</i>		2				I
<b>Bare soil</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>2</b>	
<b>Species total</b>	<b>12</b>	<b>23</b>	<b>19</b>	<b>24</b>	<b>30</b>	<b>Mean = 19.6</b>

**b. Yew Tree Heath, Dibden Inclosure Grazing Strip, Gurnetfields Furzebrake - disturbed and re-seeded areas - U1d**

A distinctive vegetation has developed on heathland disturbed by the construction of military installations during World War Two, arable cultivation in the 1940's and 50's, or by re-seeding and liming in the 1960's. A constancy table is presented for quadrats collected from the three sites and a community list from one site, Yew Tree Heath (SU3606), given below.

Dibden Inclosure Grazing Strip (SU4006) consists of 10ha of grassland (U1d/f) and herb-rich heath (transitions between U1d/f and H2) which originated from H2c and H3c heathland ploughed and re-seeded in the early 1960's. A total of 81 species were recorded including 16 lowland dry acid grassland indicator species and one nationally scarce species (*Viola lactea*).

Gurnetfields Furzebrake, Culverley (SU3704) is one of the areas of heathland, which were probably originally H2, H3 and Gorse scrub, that was ploughed up and put under arable cultivation in the 1940's and 1950's and then reseeded. U1d/f is the main community, ericaceous species have colonised but nowhere dominate. The site covers 30ha and within this area 70 species were recorded, of which 12 species were indicator species and one was a nationally scarce species (*Chamaemelum nobile*).

Yew Tree Heath (SU3606) was also much affected by military construction during World War Two, so the grassland cannot be older than 50 years. Substrates include much broken concrete, mixed with plateau gravel, and mounds of mixed material occur across the site. The vegetation consists of a mosaic of parched acid grassland, herb-rich dry heath and Gorse scrub, grading into H2 and H3 heathland. The parched acid grassland is a typical New Forest mix of U1d and U1f species. Where *Calluna* has grown into a taller sward a very curious type of heath has developed. This herb-rich heath is typical of heath recolonising disturbed soils on the New Forest. It would probably be best described as a *Danthonia* sub-community of H2 but it appears that no herb-rich heath was sampled in southern England during the preparation of the NVC.

Yew Tree Heath is remarkably species-rich with 103 species recorded in 1997, of which 24 were dry acid grassland indicator species, and 2 were nationally scarce species, *Vulpia ciliata ambigua* and *Viola lactea*. A characteristic feature is the presence of several lime-loving species such as *Clinopodium acinos*, *Carlina vulgaris*, *Cirsium acaule* and *Linum catharticum*. The sward height has been reduced to less than 1cm by heavy pony and cattle grazing and lower plants are very prominent in the grassland. The Heather in the herb-rich heath areas is not being significantly grazed.

**New Forest**

**Constancy table for U1d/f & Transition to H2 (N A Sanderson 5/1997, EPR)**

Species	U1d/f YTH1	U1d/f DGS2	U1d/f GF1	U1d/f GF2	U1/H2 DGS1	U1/H2 YTH2	Constancy
<i>Agrostis capillaris</i>	5	5	5	5	4	2	V
<i>Aira praecox</i>	3	3	2	3	3	2	V
<i>Calluna vulgaris</i>	3	1	1	3	6	8	V
<i>Danthonia decumbens</i>	1	7	8	8	7	6	V
<i>Erica cinerea</i>	2	3		2	4	4	V
<i>Festuca rubra</i>	3	2	2	3		1	V
<i>Hypochaeris radicata</i>	4	3	4	4	4	3	V
<i>Leontodon saxatilis</i>	2	3	3	3	3		V
<i>Lotus corniculatus</i>	6	5	3	6	4	5	V
<i>Pilosella officinarum</i>	5	3	3	6	4	5	V
<i>Plantago lanceolata</i>	3	4	2	3	2	3	V
<i>Vulpia bromoides</i>	4	3	3	3	3	2	V
<i>Centaurium erythraea</i>	3	3		3	2		IV
<i>Plantago coronopus</i>	6	2	4	2			IV
<i>Poa pratensis</i>	1	2	1			1	IV
<i>Polytrichum juniperinum</i>	3	4	3		3		IV
<i>Taraxacum sect Erythrosperma</i>	1	1	2	2	1		IV
<i>Bellis perennis</i>	2	2			2		III
<i>Campylopus introflexus</i>			3		2	1	III
<i>Carex caryophylla</i>			3	2		2	III
<i>Cladonia furcata</i>	2	1			4		III

Species	U1d/f YTH1	U1d/f DGS2	U1d/f GF1	U1d/f GF2	U1/H2 DGS1	U1/H2 YTH2	Constancy
<i>Euphrasia nemorosa</i>	2		3		2		III
<i>Hypnum lacunosum tectorum</i>	3		3	3			III
<i>Linum catharticum</i>	2	3			3		III
<i>Polygala serpyllifolia</i>			1	3		2	III
<i>Rumex acetosella</i>	2	2	2				III
<i>Trifolium striatum</i>	3		2	2			III
<i>Ulex minor</i>		5			4	4	III
<i>Achillea millefolium</i>	2					2	II
<i>Aira caryophylla</i>	3					2	II
<i>Anthoxanthum odoratum</i>		3			2		II
<i>Cladonia chlorophea</i>	2		2				II
<i>Luzula campestris</i>				1	4		II
<i>Rhynchospora squarrosa</i>			2	2			II
<i>Sagina procumbens</i>		2	3				II
<i>Trifolium micranthum</i>	3		2				II
<i>Viola riviniana</i>					1	2	II
<i>Aphanes inexpectata</i>			1				I
<i>Atrichum undulatum</i>	2						I
<i>Cerastium fontanum</i>					1		I
<i>Ceratodon purpureus</i>	5						I
<i>Cladonia foliacea</i>	3						I
<i>Cladonia pyxidata</i>	2						I
<i>Cladonia rangiformis</i>					2		I
<i>Dactylis glomerata</i>		1					I
<i>Dicranum scoparium</i>		3					I
<i>Festuca filiformis</i>						4	I
<i>Holcus lanatus</i>					1		I
<i>Hypnum jutlandicum</i>						3	I
<i>Luzula multiflora</i>						2	I
<i>Molinia caerulea</i>					3		I
<i>Ornithopus perpusillus</i>			2				I
<i>Pedicularis sylvatica</i>						3	I
<i>Peltigera polydactyla</i>						1	I
<i>Polytrichum piliferum</i>	2						I
<i>Potentilla erecta</i>						3	I
<i>Prunella vulgaris</i>			1				I
<i>Pseudoscleropodium purum</i>					5		I
<i>Radiola linoides</i>			3				I
<i>Ranunculus bulbosus</i>						1	I
<i>Rubus fruticosus</i>						1	I
<i>Sagina apetala</i>	2						I
<i>Scleropodium tourettii</i>	2						I
<i>Senecio jacobaea</i>					1		I
<i>Trifolium dubium</i>				2			I
<i>Trifolium pratense</i>		1					I
<i>Veronica officinalis</i>					3		I
<i>Viola canina</i>						2	I
Species total	35	27	30	22	30	28	Mean = 34.4

U1/H2 = U1d/f/H2 YTH = Yew Tree heath DG = Dibden Grazing strip GF = Gurnetfields Furzebrake, Culverley

New Forest, Yew Tree Heath  
 U1d & U1d/H2 Community  
 Date of survey: 1/6/97 & 26/7/97

Species	DAFOR
<b>Dwarf shrubs</b>	
<i>Calluna vulgaris</i>	F
<i>Erica cinerea</i>	F
<i>Ulex europaeus</i>	F
<i>Ulex minor</i> @	O
<b>Grasses</b>	
<i>Agrostis capillaris</i>	A
<i>Agrostis curtisii</i>	O
<i>Aira caryophylla</i> @	A
<i>Aira praecox</i> @	A
<i>Catapodium rigidum</i>	R
<i>Cynosurus cristatus</i>	R
<i>Dactylis glomerata</i>	R
<i>Danthonia decumbens</i>	F
<i>Festuca filiformis</i>	O
<i>Festuca rubra</i>	F
<i>Holcus lanatus</i>	R
<i>Molinia caerulea</i>	R
<i>Poa annua</i>	O
<i>Poa pratensis</i>	O
<i>Vulpia bromoides</i>	A
<i>Vulpia ciliata ambigua</i> * @	O
<b>Other vascular plants</b>	
<i>Achillea millefolium</i>	F
<i>Anagallis arvensis</i>	O
<i>Aphanes inexpectata</i> @	F
<i>Arenaria serpyllifolia</i>	R
<i>Bellis perennis</i>	O
<i>Carex caryophylla</i>	O
<i>Carex flacca</i>	R
<i>Carex panicea</i>	R
<i>Carex pilulifera</i>	F
<i>Centaurium erythraea</i>	F
<i>Cerastium fontanum</i>	R
<i>Cerastium glomeratum</i>	R
<i>Carlina vulgaris</i>	R
<i>Cerastium diffusum</i> @	O
<i>Cerastium semidecandrum</i> @	O
<i>Cirsium acaule</i>	R
<i>Clinopodium acinos</i>	R
<i>Cuscuta epithymum</i>	R
<i>Erigeron acer</i> @	O
<i>Erodium cicutarium</i> @	R

Species	DAFOR
<i>Luzula multiflora</i>	R
<i>Medicago lupulina</i>	R
<i>Moenchia erecta</i> @	O
<i>Ornithopus perpusillus</i> @	F
<i>Pedicularis sylvatica</i>	O
<i>Pilosella officinarum</i>	A
<i>Plantago coronopus</i> @	A
<i>Plantago lanceolata</i>	F
<i>Polygala serpyllifolia</i>	O
<i>Potentilla erecta</i>	O
<i>Potentilla reptans</i>	R
<i>Prunella vulgaris</i>	O
<i>Ranunculus bulbosus</i>	O
<i>Rubus fruticosus</i>	R
<i>Rumex acetosella</i>	A
<i>Sagina apetala</i>	F
<i>Sagina procumbens</i>	O
<i>Sagina subulata</i> @	O
<i>Senecio jacobaea</i>	O
<i>Taraxacum sect Erythrosperma</i>	O
<i>Teucrium scorodonia</i>	O
<i>Trifolium dubium</i>	R
<i>Trifolium micranthum</i>	F
<i>Trifolium ornithopodioides</i> @	O
<i>Trifolium pratense</i>	O
<i>Trifolium repens</i>	R
<i>Trifolium striatum</i> @	F
<i>Veronica arvensis</i>	O
<i>Veronica officinalis</i>	O
<i>Viola canina</i> @	F
<i>Viola lactea</i> * @	R
<i>Viola riviniana</i>	O
<b>Mosses</b>	
<i>Atrichum undulatum</i>	R
<i>Brachythecium albicans</i>	O
<i>Campylopus introflexus</i>	O
<i>Ceratodon purpureus</i>	A
<i>Dicranum scoparium</i>	R
<i>Hypnum jutlandicum</i>	O
<i>Hypnum lacunosum tectorum</i> @	F
<i>Polytrichum juniperinum</i>	F
<i>Polytrichum piliferum</i>	F
<i>Scleropodium tourettii</i> @	O

Species	DAFOR
<i>Euphrasia nemorosa</i>	F
<i>Filago minima</i> @	F
<i>Fragaria vesca</i>	O
<i>Galium saxatile</i>	O
<i>Hypericum humifusum</i>	R
<i>Hypericum pulchrum</i>	R
<i>Hypochaeris radicata</i>	F
<i>Leontodon saxatilis</i>	F
<i>Linum catharticum</i>	F
<i>Lotus corniculatus</i>	A
<i>Luzula campestris</i>	O

Species	DAFOR
<b>Lichens</b>	
<i>Cladonia c. cervicornis</i>	O
<i>Cladonia chlorophea</i>	O
<i>Cladonia foliacea</i> @	O
<i>Cladonia furcata</i>	F
<i>Cladonia portentosa</i>	R
<i>Cladonia pyxidata</i>	O
<i>Cladonia rangiformis</i>	F
<i>Cladonia uncialis</i> @	O
<i>Coelocaulon aculeatum</i> @	O
<i>Peltigera polydactyla</i>	O

Total number of species = 103

Number of nationally scarce species (\*) = 2

Number of acid grassland indicator species (@) = 24

### c. Blackheath, Bistern Warren, Kingstone Common - grassland on freely-draining sand- U1b

In the western part of the New Forest and on sand terraces on the edge of the flood plain of the River Avon in Hampshire, the U1f grassland characteristic of the winter-wet soils typical of most of the Forest is locally replaced by Festuca-Agrostis-Rumex Grassland typical sub-community (U1b). Six example quadrats from three sites, one in the New Forest and two on the Avon sand terraces were used to construct the constancy table shown below, and a community list for Blackheath is also given.

The acid grassland of Blackheath in the New Forest (SU1810) is on an ancient settlement-edge, green, which lies over unusually free-draining sand. The area surveyed is one of a number of species-rich U1b grasslands found in this area of the New Forest and it lacks many of the typical species of New Forest U1f stands. The grassland ranges from rather herb-poor areas dominated by bryophytes to patches of much richer vegetation. The sward height is reduced to less than 1cm by heavy pony and cattle grazing.

A total of 75 species were recorded from the U1b grassland in 1997, including 18 dry acid grassland indicator species and 3 nationally scarce species (*Crassula tillaea*, *Hypochaeris glabra* and *Peltigera canina*). Two other indicators had been recorded previously by Brewis et al (1996). The *Crassula tillaea* was originally found here as a few plants in 1990 but by 1997 had become abundant and spread widely, presumably in response to the recent dry summers. This site is the only known locality in the New Forest for *Hypochaeris glabra* and *Cerastium arvense*.

Bistern Warren lies on a river terrace (SU1400) of the River Avon. It is an interesting, privately owned site. It was formerly a rabbit warren and is now grazed by cattle and wild rabbits. The surviving acid grassland on the sand terrace has remained uncultivated because the presence of stabilised dunes and a large blow out have created uneven terrain. The blow out is bowl-shaped and in places has been eroded to the level of the modern flood plain, creating areas of wet heath and damp grassland (M16 & M25b). The slopes of the old dunes and the blow out carry U1b stands, with *Carex arenaria* occurring locally.

Kingstone Common (SU1403) lies on a sand terrace north of Bistern Warren. The Common includes important ephemeral pond communities and much acid grassland. *Galium saxatile* is more frequent here than the above sites producing a grassland type with elements of U1e. The site was ungrazed when surveyed in 1989 but has been subsequently grazed by ponies.

New Forest Area

Constancy Table for U1b & U1b/U1e

N A Sanderson 5/1997, EPR & N A Sanderson 4/1989, NCC

Species	BH3	BH1	BW1	BW4	KC4	Constancy
<i>Agrostis capillaris</i>	4	5	8	7	5	V
<i>Rumex acetosella</i>	8	3	2	4	4	V
<i>Aira praecox</i>	5	4		4	2	IV
<i>Dicranum scoparium</i>	4	3		4	2	IV
<i>Hypnum lacunosum tectorum</i>	6	5		4	2	IV
<i>Luzula campestris</i>	2		6	3	4	IV
<i>Brachythecium albicans</i>		6	7	7		III
<i>Calluna vulgaris</i>	1			3	3	III
<i>Holcus lanatus</i>			4	3	1	III
<i>Polytrichum juniperinum</i>	7	3		3		III
<i>Rhytidiadelphus squarrosus</i>		5	1	2		III
<i>Veronica arvensis</i>	2	2			1	III
<i>Anthoxanthum odoratum</i>			2		2	II
<i>Aphanes inexpectata</i>	2	2				II
<i>Carex arenaria</i>				4	4	II
<i>Cladonia furcata</i>	1			3		II
<i>Ornithopus perpusillus</i>	3	3				II
<i>Plantago coronopus</i>	2	4				II
<i>Poa annua</i>	3		2			II
<i>Pteridium aquilinum</i>	2	2				II
<i>Vulpia bromoides</i>	4	6				II
<i>Brachythecium rutabulum</i>			1			I
<i>Cerastium fontanum</i>			2			I
<i>Cerastium semidecandrum</i>	1					I
<i>Cladonia rangiformis</i>	1					I
<i>Crassula tillaea</i>	3					I
<i>Erodium cicutarium</i>		4				I
<i>Festuca filiformis</i>					7	I
<i>Galium saxatile</i>					4	I
<i>Hypochaeris glabra</i>		3				I
<i>Moenchia erecta</i>		3				I
<i>Peltigera canina</i>		4				I
<i>Poa pratensis</i>			4			I
<i>Pseudoscleropodium purum</i>					5	I
<i>Senecio jacobaea</i>		1				I
<i>Stellaria graminea</i>					3	I
<i>Taraxacum sect Erythrosperma</i>		1				I
<i>Trifolium ornithopodioides</i>		2				I
<i>Trifolium repens</i>			3			I
<i>Trifolium striatum</i>		4				I
<i>Ulex minor</i>					3	I
<i>Urtica urens</i>				1		I
<b>Species total</b>	<b>19</b>	<b>22</b>	<b>12</b>	<b>14</b>	<b>16</b>	<b>Mean = 16.6</b>

BH = Blackheath, New Forest (SU1810) (U1b)

BW = Bistern Warren, Avon River Terrace (SU1400) (U1b)

KC = Kingstone Common, Avon River Terrace (SU1403) (U1b/U1e)

**New Forest, Blackheath**

**U1b Community**

Date of survey: 24/5/97 & 11/6/97

Species	DAFOR
<b>Dwarf shrubs</b>	
<i>Calluna vulgaris</i>	O
<i>Erica tetralix</i>	R
<b>Grasses</b>	
<i>Agrostis capillaris</i>	A
<i>Aira praecox</i> @	A
<i>Anthoxanthum odoratum</i>	R
<i>Bromus hordeaceus</i>	R
<i>Danthonia decumbens</i>	O
<i>Deschampsia flexuosa</i>	O
<i>Festuca rubra</i>	R
<i>Holcus mollis</i>	R
<i>Molinia caerulea</i>	R
<i>Poa annua</i>	F
<i>Poa pratensis</i>	O
<i>Vulpia bromoides</i>	A
<b>Other vascular plants</b>	
<i>Achillea millefolium</i>	O
<i>Aphanes inexpectata</i> @	F
<i>Aretium minus</i>	R
<i>Bellis perennis</i>	R
<i>Carex panicea</i>	R
<i>Cerastium diffusum</i> @	R
<i>Cerastium fontanum</i>	R
<i>Cerastium glomeratum</i>	R
<i>Cerastium semidecandrum</i> @	O
<i>Crassula tillaea</i> * @	O
<i>Erodium cicutarium</i> @	R
<i>Galium saxatile</i>	O
<i>Hypericum humifusum</i>	R
<i>Hypochaeris glabra</i> * @	O
<i>Hypochaeris radicata</i>	O
<i>Juncus bufonius</i>	O
<i>Luzula campestris</i>	F
<i>Malva moschata</i>	R
<i>Moenchia erecta</i> @	O
<i>Ornithopus perpusillus</i> @	F
<i>Pilosella officinarum</i>	O
<i>Plantago coronopus</i> @	F
<i>Plantago lanceolata</i>	R

Species	DAFOR
<i>Potentilla erecta</i>	O
<i>Prunella vulgaris</i>	R
<i>Pteridium aquilinum</i>	F
<i>Ranunculus bulbosus</i>	R
<i>Rumex acetosella</i>	A
<i>Sagina procumbens</i>	O
<i>Senecio jacobaea</i>	R
<i>Spergularia rubra</i> @	O
<i>Stellaria graminea</i>	R
<i>Stellaria media</i>	R
<i>Taraxacum sect Erythrosperma</i>	O
<i>Trifolium dubium</i>	R
<i>Trifolium micranthum</i>	O
<i>Trifolium ornithopodioides</i> @	R
<i>Trifolium striatum</i> @	R
<i>Urtica dioica</i>	R
<i>Veronica arvensis</i>	O
<i>Veronica chamaedrys</i>	R
<i>Veronica officinalis</i>	R
<i>Veronica serpyllifolia</i>	R
<b>Mosses</b>	
<i>Brachythecium albicans</i>	O
<i>Campylopus introflexus</i>	O
<i>Ceratodon purpureus</i>	O
<i>Dicranum scoparium</i>	F
<i>Hypnum jutlandicum</i>	F
<i>Hypnum lacunosum tectorum</i> @	A
<i>Leucobryum glaucum</i>	R
<i>Pleurozium schreberi</i>	O
<i>Polytrichum juniperinum</i>	A
<i>Pseudoscleropodium purum</i>	O
<i>Rhytidiadelphus squarrosus</i>	F
<b>Lichens</b>	
<i>Cladonia arbuscula</i> @	O
<i>Cladonia ciliata</i> @	R
<i>Cladonia furcata</i>	O
<i>Cladonia portentosa</i>	R
<i>Cladonia rangiformis</i>	R
<i>Coelocaulon aculeatum</i> @	R
<i>Peltigera canina</i> * @	O

Total number of species = 75

Number of nationally scarce species (\*) = 3

Number of acid grassland indicator species (@) = 18

**Site Total of Acid Grassland Indicator Species:**

Additional indicator species recored previously Brewis et al, (1996):

*Cerastium arvense* @

*Stellaria pallida* @

Number of acid grassland indicator species (@) = 20

d. West of Gurnetfields Furzebrake - grass heath - U3

In the New Forest Agrostis curtisii Grassland (U3) is generally associated with acid brown earths, which are inherently somewhat more fertile than the soils under adjacent heaths. The community is found where no recent soil disturbance has occurred, or where there are no heavy concentrations of grazing animals. The U3 stands are invariably less diverse than the U1 grasslands and are much more like *Nardo-Galium* grasslands in character than *Thero-Airion* grasslands. Two quadrats from a surveyed example are given below along with a community species list. The site occurs in an unploughed area west of Gurnetfields Furzebrake (SU3704).

Together with *Agrostis curtisii*, the grasses *Agrostis capillaris*, *Anthoxanthum odoratum*, *Danthonia decumbens* and *Molinia caerulea* are found, with *Aira praecox* in drier areas. Typical widespread herbs include *Galium saxatile*, *Hypochaeris radicata*, *Pedicularis sylvatica*, *Potentilla erecta* and *Polygala serpyllifolia*. Locally an assemblage of *Serratula tinctoria*, *Stachys officinalis* and *Succisa pratensis* occurs.

West of Gurnetfields Furzebrake, Culverley

U3: Community list

N A Sanderson, EPR, Date of survey: 29/5/97

Species	DAFOR
<b>Dwarf shrubs</b>	
<i>Calluna vulgaris</i>	F
<i>Erica cinerea</i>	F
<i>Ulex europaeus</i>	O
<b>Grasses</b>	
<i>Agrostis capillaris</i>	A
<i>Agrostis curtisii</i>	D
<i>Aira praecox</i> @	F
<i>Anthoxanthum odoratum</i>	F
<i>Danthonia decumbens</i>	F
<i>Molinia caerulea</i>	F
<b>Other vascular plants</b>	
<i>Bellis perennis</i>	R
<i>Carex panicea</i>	O
<i>Carex pilulifera</i>	F
<i>Cerastium fontanum</i>	R
<i>Dactylorhiza maculata</i>	R
<i>Euphrasia nemorosa</i>	F
<i>Galium saxatile</i>	F
<i>Hypochaeris radicata</i>	F
<i>Juncus bufonius</i>	R

Species	DAFOR
<i>Leontodon saxatilis</i>	O
<i>Luzula campestris</i>	O
<i>Pedicularis sylvatica</i>	F
<i>Polygala serpyllifolia</i>	F
<i>Potentilla erecta</i>	F
<i>Pteridium aquilinum</i>	O
<i>Rubus fruticosus</i>	O
<i>Rumex acetosella</i>	F
<i>Serratula tinctoria</i>	O
<i>Stachys officinalis</i>	R
<i>Succisa pratensis</i>	O
<i>Teucrium scorodonia</i>	O
<i>Veronica officinalis</i>	O
<i>Viola riviniana</i>	O
<b>Other mosses</b>	
<i>Campylopus pyriformis</i>	O
<i>Dicranum scoparium</i>	O
<i>Hypnum julandicum</i>	F
<i>Polytrichum juniperinum</i>	F
<b>Lichens</b>	
<i>Placynthiella icmalea</i>	O

Total number of species = 37

Number acid grassland indicator species (@) = 1

West Of Gurnetfields Furzebrake U3: Quadrat 3 Date of survey: 29/5/97	
Species	Domin
<b>Dwarf shrubs</b>	
<i>Calluna vulgaris</i>	1
<i>Erica cinerea</i>	3
<i>Ulex europaeus</i>	1
<b>Grasses</b>	
<i>Agrostis capillaris</i>	5
<i>Agrostis curtisii</i>	8
<i>Aira praecox</i>	2
<i>Danthonia decumbens</i>	4
<i>Molinia caerulea</i>	3
<b>Other vascular plants</b>	
<i>Carex panicea</i>	3
<i>Carex pilulifera</i>	5
<i>Galium saxatile</i>	3
<i>Hypochaeris radicata</i>	3
<i>Pedicularis sylvatica</i>	2
<i>Polygala serpyllifolia</i>	3
<i>Potentilla erecta</i>	3
<i>Serratula tinctoria</i>	1
<i>Veronica officinalis</i>	1
<b>Mosses</b>	
<i>Campylopus pyriformis</i>	3
<i>Hypnum jutlandicum</i>	2
<b>Lichens</b>	
<i>Placynithiella icmalea</i>	2

Total number of species = 20  
 Quadrat size = 4m<sup>2</sup>  
 Vegetation height = 0 - 2cm  
 Management: heavily pony & cattle grazed

West Of Gurnetfields Furzebrake U3: Quadrat 4 Date of survey: 29/5/97	
Species	Domin
<b>Dwarf shrubs</b>	
<i>Calluna vulgaris</i>	2
<i>Erica cinerea</i>	1
<b>Grasses</b>	
<i>Agrostis capillaris</i>	4
<i>Agrostis curtisii</i>	7
<i>Anthoxanthum odoratum</i>	5
<i>Danthonia decumbens</i>	2
<i>Molinia caerulea</i>	4
<b>Other vascular plants</b>	
<i>Carex panicea</i>	3
<i>Carex pilulifera</i>	6
<i>Galium saxatile</i>	2
<i>Hypochaeris radicata</i>	3
<i>Pedicularis sylvatica</i>	2
<i>Polygala serpyllifolia</i>	3
<i>Potentilla erecta</i>	5
<i>Pteridium aquilinum</i>	2
<i>Serratula tinctoria</i>	3
<i>Stachys officinalis</i>	2
<i>Succisa pratensis</i>	2
<i>Veronica officinalis</i>	4

Total number of species = 19  
 Quadrat size = 4m<sup>2</sup>  
 Vegetation height = 0 - 3cm  
 Management: heavily pony & cattle grazed

e. **New Forest Site (SU30, location withheld) - species-rich bracken - U20a**

The site consists of 4.25ha of Bracken-dominated grassland north of an ancient pasture woodland, in the open grazings of the New Forest. A community species list and two quadrats are reproduced below. The sampled area is at the base of a slope and is clearly on reasonably fertile brown earths, similar to those within the woodland but very different from the heath beyond. The junction between the species-rich bracken and the heath is quite sharp. The history of the site is obscure and would require detailed investigation but some relationship with the adjacent pasture woodland is suggested.

The area is variably dominated by Bracken (the fronds were still expanding when the site was visited). The vegetation is species-rich and the dominance of Bracken places it clearly within U20a. However the frequency of *Anemone nemorosa* and *Hyacinthoides non-scripta* indicates a relationship with W10b (the adjacent pasture woodland is a W10b/W11 transition). Other species such as *Serratula tinctoria*, *Stachys officinalis*, *Succisa pratensis*, *Carex montana* and *Lathyrus latifolius* are also characteristic of local W10b woodlands, and these species are in addition found locally in M24c, M16b and MG5c stands. These communities have also probably derived from the clearance or regression of W10b type woodland. Any relation with U4c, at least as defined in the NVC, is quite weak in comparison.

The flora is not as diverse as the richest parched acid grasslands sites. A total of 68 species were recorded and, not unexpectedly there were few dry acid grassland indicators. The vegetation is, however, remarkably rich for a Bracken stand, with the nationally rare *Gladiolus illyricus* and the nationally scarce *Carex montana* present. The former plant is confined to this habitat in Britain and unlike many of the other species of interest has never been recorded inside woodland.

Much of the stand is mown annually in late summer for bracken litter. This is probably too frequent and may be threatening both the *Gladiolus illyricus* population and compromising the potential of the site to support butterflies which feed on violets. Rotational cutting, with no area cut more than once every two or three years, would be more appropriate. The site is heavily grazed by cattle and ponies except in mid-summer when dense Bracken stands are largely avoided by stock.

**New Forest SU30**  
**U20a: Community List**

Date of survey: 28/5/97

Species	DAFOR
<b>Trees &amp; tall shrubs</b>	
<i>Crataegus monogyna</i>	O
<i>Prunus spinosa</i>	R
<b>Dwarf shrubs</b>	
<i>Calluna vulgaris</i>	O
<i>Erica cinerea</i>	F
<i>Genista anglica</i>	R
<b>Grasses</b>	
<i>Agrostis capillaris</i>	A
<i>Agrostis curtisii</i>	O
<i>Aira praecox</i> @	O
<i>Anthoxanthum odoratum</i>	F
<i>Danthonia decumbens</i>	F
<i>Festuca filiformis</i>	A
<i>Festuca rubra</i>	A
<i>Molinia caerulea</i>	O
<i>Poa pratensis</i>	R
<i>Vulpia bromoides</i>	O
<b>Other vascular plants</b>	
<i>Achillea millefolium</i>	O
<i>Ajuga reptans</i>	O
<i>Anemone nemorosa</i>	F
<i>Bellis perennis</i>	O
<i>Campanula rotundifolia</i>	O
<i>Carex caryophyllea</i>	A
<i>Carex montana</i> * @	F
<i>Carex panicea</i>	O
<i>Centaurium erythraea</i>	O
<i>Cerastium fontanum</i>	R
<i>Conopodium majus</i>	O
<i>Dactylorhiza maculata</i>	O
<i>Euphrasia nemorosa</i>	F
<i>Galium saxatile</i>	O
<i>Gladiolus illyricus</i> ** @	R
<i>Hyacinthoides non-scripta</i>	F
<i>Hypericum pulchrum</i>	O

Species	DAFOR
<i>Hypochaeris radicata</i>	A
<i>Lathyrus latifolius</i>	R
<i>Lonicera periclymenum</i>	O
<i>Lotus corniculatus</i>	F
<i>Luzula campestris</i>	F
<i>Lysimachia nemorum</i>	R
<i>Pedicularis sylvatica</i>	O
<i>Pilosella officinarum</i>	A
<i>Plantago lanceolata</i>	O
<i>Polygala serpyllifolia</i>	O
<i>Potentilla erecta</i>	F
<i>Potentilla sterilis</i>	O
<i>Prunella vulgaris</i>	O
<i>Pteridium aquilinum</i>	D
<i>Rubus fruticosus</i>	R
<i>Sagina procumbens</i>	O
<i>Senecio jacobaea</i>	O
<i>Serratula tinctoria</i>	A
<i>Stachys officinalis</i>	F
<i>Succisa pratensis</i>	F
<i>Taraxacum sect Erythrosperma</i>	O
<i>Teucrium scorodonia</i>	R
<i>Trifolium micranthum</i>	R
<i>Trifolium repens</i>	R
<i>Veronica chamaedrys</i>	R
<i>Veronica officinalis</i>	F
<i>Viola riviniana</i>	F
<b>Mosses</b>	
<i>Campylopus introflexus</i>	R
<i>Dicranum scoparium</i>	R
<i>Hypnum cupressiforme</i> agg	O
<i>Polytrichum juniperinum</i>	R
<i>Pseudoscleropodium purum</i>	O
<i>Rhytidiadelphus squarrosus</i>	O
<b>Lichens</b>	
<i>Cladonia chlorophea</i>	O

Total number of species = 66  
Number of nationally rare species (\*\*\*) = 1

Number of nationally scarce species (\*) = 1  
Number of acid grassland indicator species (@) = 3



## 6. Hampshire: Natural Area 70, Wealden Greensand

### Woolmer Forest area, (SU7831) - disturbed heathland edge - U1

The site is a disturbed transport corridor which originated when a military railway (now abandoned) was built. The disturbance has created a wide variety of species-rich acid grassland including U1a, U1b, U1c, U1d and SD11a which occur within undisturbed H1 and H2 heath.

As part of a study of the impact of road widening on important acid grasslands just outside Woolmer Forest SSSI (Sanderson & Stanbury, 1996), 5 quadrats each were taken from U1a, U1c and U1b. These data are presented below as a constancy table illustrating the differences and similarities between these communities in this area.

During the Sanderson & Stanbury (1996) study, 32 lowland acid grassland indicator species were recorded from the area:

<b>Grasses</b>	<i>Plantago coronopus</i>
<i>Aira caryophylllea</i>	<i>Potentilla argentea</i>
<i>Aira praecox</i>	<i>Radiola linoides</i>
<i>Vulpia ciliata</i> *	<i>Sedum acre</i>
<b>Other vascular plants</b>	<i>Stellaria pallida</i>
<i>Aphanes inexpectata</i>	<i>Teesdalia nudicaulis</i>
<i>Carex arenaria</i>	<i>Trifolium ornithopodioides</i>
<i>Cerastium diffusum</i>	<b>Mosses</b>
<i>Cerastium semidecandrum</i>	<i>Tortula ruraliformis</i>
<i>Chamaemelum nobile</i> *	<b>Lichens</b>
<i>Crassula tillaea</i> *	<i>Cladonia arbuscula</i>
<i>Erodium cicutarium</i>	<i>Cladonia ciliata</i>
<i>Erigeron acer</i>	<i>Cladonia crispata</i>
<i>Filago minima</i>	<i>Cladonia foliacea</i>
<i>Hypochaeris glabra</i> *	<i>Cladonia gracilis</i>
<i>Moenchia erecta</i>	<i>Cladonia uncialis</i>
<i>Myosotis ramosissima</i>	<i>Coelocaulon aculeatum</i>
<i>Ornithopus perpusillus</i>	<i>Peltigera rufescens</i>

Nationally scarce species (\*) = 4

Acid grassland indicators = 32

**Woolmer Forest area, Hampshire (SU7831)**  
**Constancy table comparing U1a, U1c & U1b**  
 From Sanderson & Stanbury (1996) EPR

Species	U1a	U1c	U1b	U1
<b>Shared constants</b>				
<i>Agrostis capillaris</i>	V	V	V	V
<i>Aira praecox</i>	V	V	V	V
<i>Rumex acetosella</i>	V	V	V	V
<i>Polytrichum piliferum</i>	V	III	IV	IV
<i>Ulex europaeus</i>	IV	IV	III	IV
<b>Species preferential to U1a</b>				
<i>Cladonia furcata</i>	V	II	III	IV
<i>Festuca filiformis</i>	V	III	III	IV
<i>Cladonia c. cervicornis</i>	V		II	III
<i>Cladonia diversa</i>	V		II	III
<i>Cladonia portentosa</i>	V		II	III
<i>Coelocaulon aculeatum</i>	IV	III	II	III
<i>Deschampsia flexuosa</i>	V	I	II	III
<i>Cladonia crispata</i>	V			II
<i>Dicranum scoparium</i>	V		I	II
<i>Cladonia chlorophea</i>	IV		I	II
<i>Cladonia uncialis</i>	IV			II
<i>Hypnum jutlandicum</i>	IV		I	II
<i>Trapelia involuta</i>	IV			II
<i>Trapeliopsis flexuosa</i>	III		I	II
<i>Trapeliopsis granulosa</i>	III			I
<i>Cladonia gracilis</i>	II			I
<i>Pohlia nutans</i>	II			I
<i>Quercus robur</i>	II			I
<i>Senecio sylvaticus</i>	II			I
<i>Cladonia ciliata tenuis</i>	I			I
<i>Erica cinerea</i>	I			I
<i>Hypogymnia physodes</i>	I			I
<i>Rhizocarpon obscuratum</i>	I			I
<i>Stellaria pallida</i>	I			I
<i>Trapeliopsis pseudogranulosa</i>	I			I
<b>Species shared between U1a &amp; U1c</b>				
<i>Filago minima</i>	V	V		IV
<i>Hypochaeris glabra</i>	V	V		IV
<i>Cerastium semidecandrum</i>	IV	III		III
<i>Teesdalia nudicaulis</i>	IV	III	I	III
<i>Cerastium diffusum</i>	III	III		II
<i>Peltigera rufescens</i>	I	II		I
<b>Species preferential to U1c</b>				
<i>Aphanes inexpectata</i>		V	II	III
<i>Erodium cicutarium</i>	I	V		II
<i>Brachythecium albicans</i>		IV		II
<i>Myosotis ramosissima</i>	I	III	I	II
<i>Sagina apetala</i>	I	III		II
<i>Arabidopsis thaliana</i>		II		I
<i>Erophila verna</i>		II		I
<i>Vulpia ciliata</i>		II		I
<i>Aira caryophyllea</i>		I		I

Species	U1a	U1c	U1b	U1
<i>Barbula convoluta</i>		I		I
<i>Dactylis glomerata</i>		I		I
<i>Hypericum perforatum</i>		I		I
<i>Leontodon saxatilis</i>		I		I
<i>Myosotis arvensis</i>		I		I
<i>Poa annua</i>		I		I
<i>Poa pratensis</i>		I		I
<i>Pseudoscleropodium purum</i>		I		I
<i>Sedum acre</i>		I		I
<i>Sedum album</i>		I		I
<i>Taraxacum Erythrosperma</i>		I		I
<i>Trifolium dubium</i>		I		I
<i>Tripleurospermum inodorum</i>		I		I
<i>Viola arvensis</i>		I		I
<b>Species preferential to U1b</b>				
<i>Polytrichum juniperinum</i>	I	II	IV	III
<i>Campylopus introflexus</i>	II		IV	III
<i>Festuca rubra</i>			I	I
<i>Funaria hygrometrica</i>			I	I
<i>Gymnocolea inflata</i>			I	I
<i>Juncus squarrosus</i>			I	I
<i>Pteridium aquilinum</i>			I	I
<i>Ranunculus bulbosus</i>			I	I
<i>Rubus fruticosus</i>			II	I
<b>Species shared between U1c &amp; U1b</b>				
<i>Ornithopus perpusillus</i>		II	III	II
<i>Senecio jacobaea</i>		II	I	I
<i>Sonchus asper</i>		II	I	I
<i>Vulpia bromoides</i>		II	I	I
<i>Cerastium fontanum</i>		I	I	I
<i>Geranium molle</i>		I	I	I
<i>Rhytidadelphus squarrosus</i>		I	I	I
<b>Species shared between U1a &amp; U1b</b>				
<i>Calluna vulgaris</i>	II		I	I
<b>Shared non-constants</b>				
<i>Hypochaeris radicata</i>	II	II	I	III
<i>Ceratodon purpureus</i>	I	II	I	II
<i>Luzula campestris</i>	I	II	I	II
<i>Veronica arvensis</i>	I	I	I	I
<b>Total Number of Samples</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>15</b>
<b>Total Number of Species</b>	<b>46</b>	<b>50</b>	<b>42</b>	<b>80</b>
<b>Mean Number of Species</b>	<b>27.8</b>	<b>22.0</b>	<b>15.4</b>	<b>21.7</b>
<b>Bare ground (mean %)</b>	<b>4.6</b>	<b>5.2</b>	<b>2.4</b>	

U1a = Festuca-Agrostis-Rumex Grassland, Cornicularia-Cladonia sub-community

U1c = Festuca-Agrostis-Rumex Grassland, Erodium-Teesdalia sub-community

U1b = Festuca-Agrostis-Rumex Grassland, Typical sub-community

Quadrat size = 4m<sup>2</sup>